Abstract

A sample presentation unit (SPU) for an automated analyzer is provided. The SPU has a sample rack onload section having an elongated rail, and an onload moving mechanism movable along the rail for moving the sample racks placed on the rail towards a sample rack presentation section. The sample rack presentation section of the SPU has a transfer area connected to the proximal end of the rail of the sample rack onload section for receiving the sample racks from the sample rack onload section, a sample presentation area adjacent to the automated analyzer for presenting sample racks for aspiration, and a presentation moving mechanism movable between the transfer area and the presentation area for moving sample racks from the transfer area to the presentation area for a sample aspiration and subsequently moving the sample racks from the presentation area back to the transfer area after sample aspiration. The SPU also has a sample rack offload section having an offload area connected to the transfer area of the sample rack presentation section for receiving the sample racks from the sample rack presentation section after sample aspiration, and an offload moving mechanism for moving the sample racks received from the sample rack presentation section to a sample rack offload tray. The SPU further has a plurality of strategically located sensors for detection of motion errors or motor jams.